

Occupational Safety

MAY 21 1991

MATERIAL SAFETY DATA SHEET

PRODUCT SOLUTION S0322 EP-2

Emergency Telephone Number Medical (708) 920-1510 (24 hours)

SECTION 1 PRODUCT IDENTIFICATION

ORIGINAL

TRADE NAME: SOLUTION S0322 EP-2

DESCRIPTION: EP-2, ammonium persulfate

NFPA 704M/HMIS RATING: 1/1 HEALTH 2/2 FLAMMABILITY 1/1 REACTIVITY OXY OTHER

0=Insignificant l=Slight 2=Moderate 3=High 4=Extreme

SECTION 2 HAZARDOUS INGREDIENTS

Our hazard evaluation has identified the following chemical ingredient(s) as hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 14 for the nature of the hazard(s).

INGREDIENT(S)

CAS #

APPROX.%

Ammonium persulfate

7727-54-0

100

SECTION 3 PRECAUTIONARY LABEL INFORMATION

CAUTION: May cause eye or skin irritation. Do not take internally.

Store in a cool, dry area. Keep away from organic materials.

SECTION 4 FIRST AID INFORMATION

EYES:

Immediately flush for at least 15 minutes while holding

eyelids open. Call a physician at once.

SKIN:

Flush with water for 15 minutes.

INGESTION: INHALATION:

Do not induce vomiting. Give water. Call a physician. Remove to fresh air. Treat symptoms. Call a physician.

NOTE TO PHYSICIAN: No specific antidote is known. Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

SECTION 5 HEALTH EFFECTS INFORMATION

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin, Inhalation

EYE CONTACT:

Non-irritating.

SKIN CONTACT:

Can cause moderate irritation.

INGESTION:

Can be harmful.

INHALATION:

Can cause severe respiratory irritation.

PAGE 1 OF 6



NALCO

MATERIAL SAFETY DATA SHEET

PRODUCT SOLUTION S0322 EP-2

Emergency Telephone Number Medical (708) 920-1510 (24 hours)

SECTION 6 TOXICOLOGY INFORMATION

ACUTE TOXICITY STUDIES: Acute toxicity studies have not been conducted on this product, but toxicity studies of the ingredient(s) in Section 2 have been reviewed. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS): Ammonium persulfate LD₅₀ = 820 mg/kg

SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Off-white SPECIFIC GRAVITY: FORM: Powder 1.98

ODOR: None

pH (at 1%) = MELTING POINT:

4 - 5

ASTM D-1298

Decomposes @ 175 Degrees C

ASTM E-70 ASTM D-2117

FLASH POINT:

Not applicable

NOTE: These physical properties are typical values for this product.

8 FIRE AND EXPLOSION INFORMATION SECTION

FLASH POINT: Not applicable

EXTINGUISHING MEDIA: Soak with water.

UNUSUAL FIRE AND EXPLOSION HAZARD: Strong oxidizer - contact with organics may cause a fire.

SECTION 9 REACTIVITY INFORMATION

INCOMPATIBILITY: Avoid contact with organic materials (eg. rags, sawdust, hydrocarbon oils or solvents) and avoid reducing agents (eg. hydrazine, sulfites, sulfides, aluminum or magnesium dust) which can generate heat, fires, explosions and the release of toxic fumes. Also avoid acids, alkalies and halides.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion ammonia, oxygen, SOx, and ozone may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

SECTION 10 PERSONAL PROTECTION EQUIPMENT

RESPIRATORY PROTECTION: If it is possible to generate dust, wear a NIOSH approved or equivalent dust respirator.

VENTILATION: If significant dusting occurs, local exhaust ventilation

PAGE 2 OF 6



MATERIAL SAFETY DATA SHEET

PRODUCT SOLUTION S0322 EP-2

Emergency Telephone Number Medical (708) 920-1510 (24 hours)

SECTION 10 PERSONAL PROTECTION EQUIPMENT

(CONTINUED)

is recommended.

PROTECTIVE EQUIPMENT: Wear gloves, and safety glasses.

SECTION 11 SPILL AND DISPOSAL INFORMATION

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (708-920-1510)

SPILL CONTROL AND RECOVERY:

Solid spills: Sweep or vacuum up, add a large volume of water. Flush to laboratory drain or sewer with water.

DISPOSAL: If this product becomes a waste, it meets the criteria of a hazardous waste as defined under the Resources Conservation and Recovery Act (RCRA) 40 CFR 261. Hazardous Waste D001.

Dissolve in a large volume of water. Neutralize, if needed, and flush to laboratory drain or sanitary sewer with water.

Empty product containers should be punctured, if plastic, and placed in the garbage collection container.

SECTION 12 ENVIRONMENTAL INFORMATION

If released into the environment, see CERCLA in Section 14.

SECTION 13 TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME/HAZARD CODE - AMMONIUM PERSULFATE OXIDIZER UN 1444 AMMONIUM PERSULFATE

CONTAINS

SECTION 14 REGULATORY INFORMATION

The following regulations apply to this product.

FEDERAL REGULATIONS:

OSHA'S HAZARD COMMUNICATION RULE, 29 CFR 1910.1200: Based on our hazard evaluation, the following ingredient in this product is hazardous and the reason is shown below.

> PAGE 3 OF 6



NALCO

PRODUCT SOLUTION S0322 EP-2

Emergency Telephone Number Medical (708) 920-1510 (24 hours)

SECTION 14 REGULATORY INFORMATION

(CONTINUED

Ammonium persulfate - Oxidizer

CERCLA/SUPERFUND, 40 CFR 117, 302: Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355): This product does not contain ingredients listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

- -- Immediate (acute) health hazard
- -- Delayed (chronic) health hazard
- XX Fire hazard
- -- Sudden release of pressure hazard
- -- Reactive hazard

Under Section 311, submittal of MSDS's or a list of product names to the local emergency planning commission, state emergency response commission and local fire department is required after October 17, 1987 if you have:

- 10,000 pounds or more of a hazardous substance, or
- 500 pounds or the threshold planning quantity, whichever is less, of an extremely hazardous substance.

After October 17, 1989, MSDS(s), or a list of product names for all hazardous substances between zero (0) and 10,000 pounds, not previously reported, must be submitted.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372): This product does not contain ingredients (at a level of 1% or greater) on the List of Toxic Chemicals.

TOXIC SUBSTANCES CONTROL ACT (TSCA):
The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

PAGE 4 OF 6



MATERIAL SAFETY DATA SHEET

PRODUCT SOLUTION S0322 EP-2

Emergency Telephone Number Medical (708) 920-1510 (24 hours)

SECTION 14 REGULATORY INFORMATION

(CONTINUED)

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D: If this product becomes a waste, it does meet the criteria of a hazardous waste as defined under RCRA 40 CFR 261 (consult Section 11).

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 (formerly Sec. 307), 40 CFR 116 (formerly Sec. 311): None of the ingredients are specifically listed.

CLEAN AIR ACT, 40 CFR 60, SECTION 111, 40 CFR 61, SECTION 112: This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:

None of the chemicals on the current Proposition 65 list are known to be present in this product.

MICHIGAN CRITICAL MATERIALS:

This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:

The following state identify the ingredient shown below as hazardous:

New Jersey - Ammonium persulfate

SECTION 15 ADDITIONAL INFORMATION

None

SECTION 16 USER'S RESPONSIBILITY

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 17 BIBLIOGRAPHY

ANNUAL REPORT ON CARCINOGENS, U.S. Department of Health and Human Services,

PAGE 5 OF 6



MATERIAL SAFETY DATA SHEET

PRODUCT SOLUTION SO322 EP-2

Emergency Telephone Number
Medical (708) 920-1510 (24 hours)

SECTION 17 BIBLIOGRAPHY

(CONTINUED)

Public Health Service, PB 33-135855, 1983.

CASARETT AND DOULL'S TOXICOLOGY, THE BASIC SCIENCE OF POISONS, Doull, J., Klaassen, C. D., and Admur, M. O., eds., Macmillian Publishing Company, Inc., N. Y., 2nd edition, 1980.

CHEMICAL HAZARDS OF THE WORKPLACE, Proctor, N. H., and Hughes, J. P., eds., J. P. Lipincott Company, N.Y., 1981.

DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, Sax, N. Irving, ed., Van Nostrand Reinhold Company, N.Y., 6th edition, 1984.

IARC MONOGRAPHS ON THE EVALUATION OF THE CARCINOGENIC RISK OF CHEMICALS TO MAN, Geneva: World Health Organization, International Agency for Research on Cancer, 1972-1977.

PATTY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, Clayton, G. D., Clayton, F. E., eds., John Wiley and Sons, N. Y., 3rd edition, Vol. 2 A-C, 1981.

REGISTRY OF TOXIC EFFECTS ON CHEMICAL SUBSTANCES, U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, 1983 supplement of 1981-1982 edition, Vol. 1-3, OH, 1984.

Title 29 Code of Federal Regulations Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS IN THE WORKROOM ENVIRONMENT WITH INTENDED CHANGES, American Conference of Governmental Industrial Hygienists, OH.

PREPARED BY: Ricky A. Stackhouse PhD., Toxicologist

DATE CHANGED: 05/15/89 DATE PRINTED: 04/06/91

PAGE 6 OF 6